DATA PRESERVATION AND REINTERPRETATION

Ana Trisovic, Harvard University
previously with: LHCb, CERN Open Data
and CERN Analysis Preservation

Snowmass Community Planning Meeting
October 6, 2020

"Ten or 20 years ago we might have been able to repeat an experiment. They were simpler, cheaper and on a smaller scale. Today that is not the case. So if we need to re-evaluate the data we collect to test a new theory or adjust it to new development, we are going to have to be able reuse it."

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Data reinterpretation or testing new theories	Conduct new measurements and improve old	Verify, reproduce, build upon old results	Newcomer training and education

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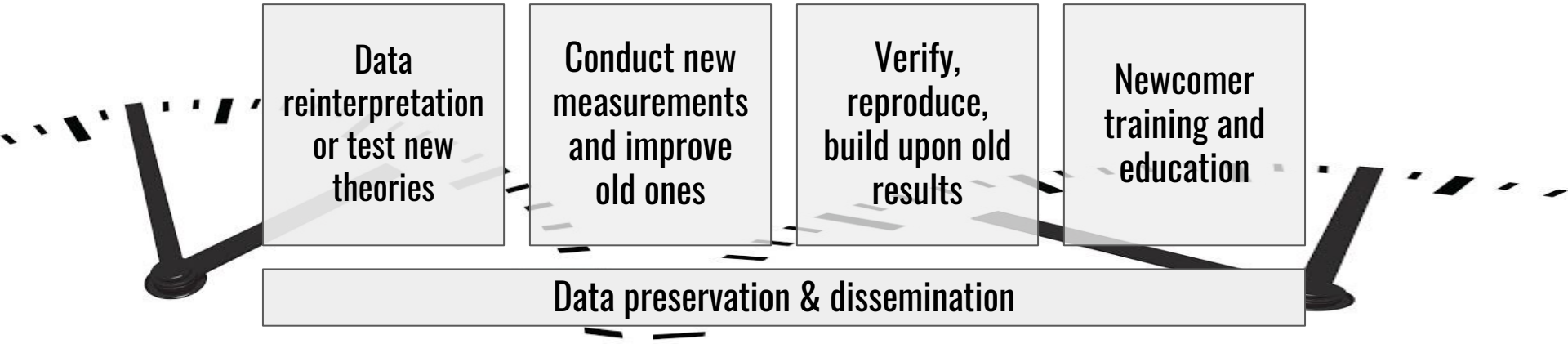

CERN data preservation & dissemination strategies

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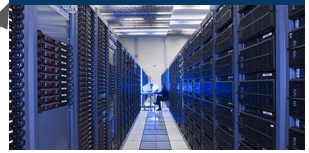

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Open Science projects

OPEN ACCESS

CERN data preservation & dissemination strategies

Open Science projects

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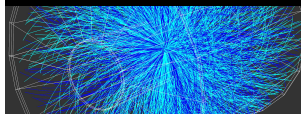
New data collection or preselection



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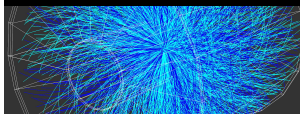

Copy data to new tapes

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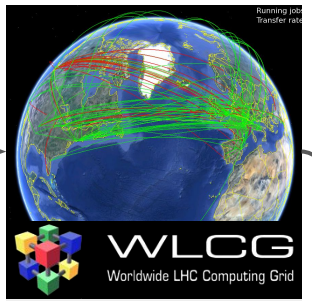
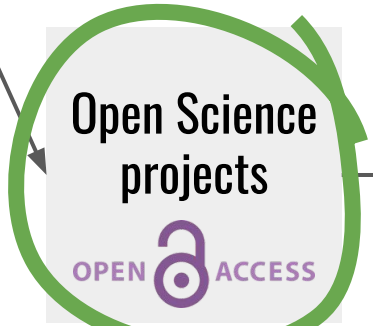



nature physics
PERSPECTIVE
OPEN

Open is not enough

CERN data preservation & dissemination strategies




nature physics
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WHAT ARE THE BENEFITS OF OPEN SCIENCE PROJECTS?

- Detailed data documentation and portable software created for open science projects also help internal researchers and newcomers.
- Resources for data reinterpretation can initiate new collaborations.
- Providing outreach and education resources may positively impact future grant applications.
- Get new physics results.

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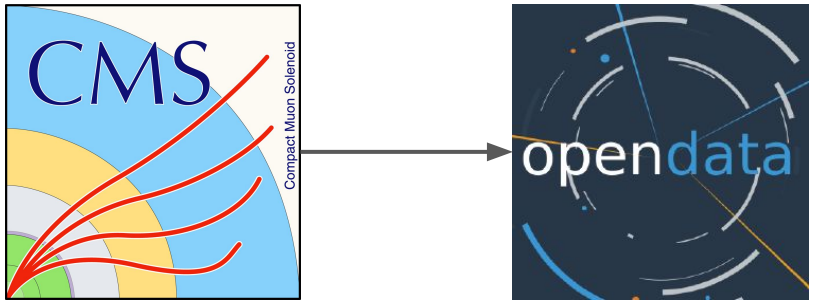

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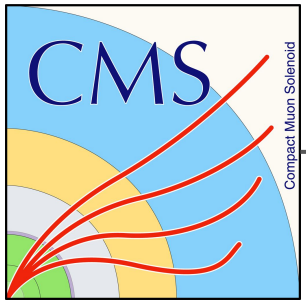

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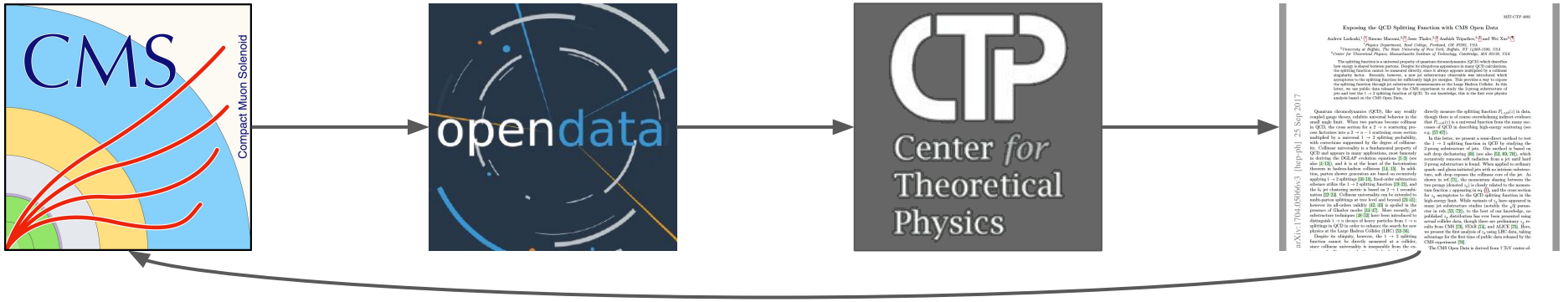

Conclusion: To maximize the potential of your HEP experimental data and reap the benefits of open science, it is essential to establish ***open data policies*** early-on in new collaborations.